

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LP MATTHEWS LLC,)	
)	
Plaintiff,)	
)	
v.)	Civ. No. 04-1507-SLR
)	
BATH & BODY WORKS, INC.,)	
LIMITED BRANDS, INC., KAO)	
BRANDS CO., and KAO CORP.,)	
)	
Defendants.)	
BATH & BODY WORKS, INC., and)	
LIMITED BRANDS, INC.,)	
)	
Counterclaim)	
Plaintiffs,)	
)	
v.)	
)	
LP MATTHEWS LLC,)	
)	
Counterclaim)	
Defendant.)	

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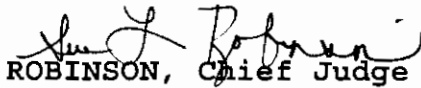
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MEMORANDUM OPINION

Dated: October 19, 2006
Wilmington, Delaware


ROBINSON, Chief Judge

I. INTRODUCTION

On December 8, 2004, LP Matthews LLC ("plaintiff") filed suit against Kao Brands Co. and Kao Corporation (together, "KBC"),¹ as well as Bath & Body Works, Inc. and Limited Brands, Inc. (together, "BBW")² (collectively, "defendants"), alleging infringement of claims 6 and 9 of United States Patent No. 5,063,062 ("the '062 patent") under 35 U.S.C. §§ 101 et seq. (D.I. 1) Plaintiff amended its complaint on February 2, 2005. (D.I. 5) On April 4, 2005, BBW filed a counterclaim against plaintiff, requesting a declaratory judgment that: (1) it did not infringe the '062 patent; (2) the '062 patent is invalid; and (3) the action at bar qualifies as an "exceptional case" under 35 U.S.C. § 285. (D.I. 22) Currently before the court are defendants' motions for summary judgment based on invalidity (D.I. 245, 247, 265, 268, 272);³ BBW's motion for summary

¹Kao Corporation, a Japanese company, is the corporate parent of Kao Brands Co. (D.I. 5 at ¶ 7) Although it is not entirely clear from the record that Kao Brands Co.'s motions for summary judgment were also filed on behalf of Kao Corporation, the court will assume as much and include Kao Corporation within the term "KBC."

²As Limited Brands, Inc., a Delaware corporation, is the parent corporation of Bath & Body Works, Inc. (D.I. 5 at ¶ 4), the court will include it in the term "BBW."

³KBC challenges the validity of the '062 patent on the grounds of a subsequent decision made by the Board of Patent Appeals and Interferences ("the Board") (D.I. 245) and lack of written description (D.I. 247). BBW is challenging validity under the theories of anticipation (D.I. 265), obviousness (D.I. 268), and lack of written description (D.I. 272).

judgment of unenforceability due to inequitable conduct (D.I. 258); and the parties' various motions to exclude expert reports and testimony (D.I. 230, 231, 232, 233, 234, 239). The court has jurisdiction under 28 U.S.C. §§ 1331, 1332, and 1338(a), and venue is proper under 28 U.S.C. §§ 1391 and 1400(b).

II. BACKGROUND

A. The '062 Patent

The United States Patent and Trademark Office ("PTO") issued the '062 patent on November 5, 1991. (D.I. 2) The patent lists Douglas Greenspan and William Ingram as the assignees. (*Id.*) On July 31, 1990, Greenspan and Ingram decided "to grant to The Greenspan Company [("Greenspan Co.")] the sole and exclusive right to control of the manufacture, license, marketing and all other aspects of control of the product Healthy Kleaner and control of the patent that has been applied for on the product if issued," which ultimately became the '062 patent; Greenspan and Ingram signed a nunc pro tunc agreement to that effect on March 15, 2004. (D.I. 142, exs. B, E) On January 15, 2004, Greenspan Co. purported to assign to plaintiff the rights to the '062 patent.⁴ (*Id.*, exs. D, F)

⁴Defendants challenge the validity of this assignment (D.I. 142 at 4-5; D.I. 89 at 1; D.I. 256), in part because the proper name of Greenspan Co. is actually Greenspan **Corporation**. (D.I. 257, ex. H) For the purposes of this opinion only, the court will assume that the assignment was valid.

The '062 patent, entitled "Cleaning Compositions with Orange Oil," describes the patented product ("the invention") as

[a] cleaning composition for cleaning the skin [which] contains orange oil, a pharmaceutically acceptable moisturizer and an emulsifying agent[.] Preferably the orange oil accounts for between 5% and 60% by volume, and it [is] further preferred that the composition contains 40% orange oil by volume. The moisturizer is either glycerin, aloe vera, jojoba oil, safflower oil or a combination thereof. The emulsifying agent preferably is oatmeal. The composition is constituted to have a pH of between 4.5 and 6.0, and the composition may be packaged as moistened towellets [sic] in hermetic packets.

('062 patent, Abstract) The invention was designed to remove "non-water soluble products" such as "grease, caulking, adhesives, sealants, tar, oils, ink and the like," which typically do not respond effectively to more common cleansers like hand soap. (Id., col. 2, ll. 12-15) Other substances which are commonly used to remove non-water soluble products "are harsh and can damage the skin, especially after prolonged use." (Id., col. 1, ll. 28-43) The inventors recognized "the suitability of orange oil" as a skin cleaning compound; however, "[o]range oil by itself is a skin irritant that can cause inflammation of the tissues." (Id., col. 1, ll. 50 to col. 2, ll. 7) As a result, after creating a number of different samples with differing amounts of orange oil and pH levels (id., col. 2-8), the inventors claimed a range of mixtures which they believed would "remove[] unwanted substances from the human skin but also act[]

to help clean and revitalize the human skin." (Id., col. 2, ll. 21-24)

Plaintiff alleges that defendants have infringed claims 6 and 9 of the '062 patent, which claims disclose the following:

6. A skin cleaning composition for external use on human tissues, comprising orange oil, a pharmaceutically acceptable moisturizer for human skin and an oat grain derivative product as an emulsifying agent, wherein said composition has a pH within a range of 4.5 to 6.0 inclusively.

.

9. A cleaning composition for use on human skin comprising forty-five percent (45%) or less by volume of orange oil, forty-five percent (45%) or less by volume of oatmeal and a pharmaceutically acceptable moisturizer.

(Id., col. 10, ll. 1-6, 13-17)⁵

B. The Accused Products

1. The KBC Products

⁵Claim 1, the only other independent claim in the '062 patent, discloses:

A skin cleaning composition adapted for external use on human tissues, comprising a first ingredient being between five percent (5%) and sixty percent (60%) by volume of orange oil, a second ingredient being a pharmaceutically acceptable moisturizer for human skin and a third ingredient being an emulsifying agent in the form of an oat grain derivative product.

('062 patent, col. 9, ll. 4-10)

Plaintiff has accused four of KBC's products ("the KBC products") of infringement in the case at bar.⁶ Plaintiff and KBC agree that the KBC products incorporate no more than 0.03% orange oil by weight (which translates to no more than approximately 0.035% orange oil by volume). (D.I. 248 at 4; D.I. 251, exs. 1-4; D.I. 260, ex. J at 35-37)

2. The BBW Products

Twenty-seven different products made by BBW ("the BBW products") are at issue in the case at bar.⁷ (D.I. 292 at 5-6) According to the report prepared by plaintiff's expert,

⁶The KBC products are: (1) Curél Ultra Healing Lotion, which is still currently in production; and (2) Curél Extreme Care Body Lotion, (3) Curél Extreme Care Facial Wash, and (4) Curél Extreme Care Body Cleanser, which have been discontinued. (D.I. 278 at 4)

⁷The BBW products are: (1) BBW Mango Mandarin Cream Body Wash; (2) TBS Better Lather Than Never Bubble Bath and Shower Cream; (3) BBW Mango Mandarin Skin Refining Body Scrub; (4) BBW Mango Mandarin Skin Renewal & Anti-Aging Body Wash; (5) Burt's Bees Citrus Facial Scrub; (6) Burt's Bees Orange Essence Facial Cleanser; (7) TBS Good Clean Foam Face Wash; (8) PS Ginger Rejuvenating Shower Foam; (9) PS Ginger Rejuvenating Body Scrub; (10) BBW Mandarin Body Lotion; (11) BBW Cool Citrus Basil Body Lotion; (12) BBW Mango Mandarin Hand Repair & Healing Cream; (13) BBW Mango Mandarin Skin Repair & Healing Body Butter; (14) PS Salt Toning Body Balm; (15) Murad Resurgence Sheer Lustre Day Moisture; (16) Murad Resurgence Age-Diffusing Serum; (17) Murad Resurgence Age-Balancing Night Cream; (18) Murad Skin Perfecting Lotion; (19) Murad Acne Spot Treatment; (20) PS Ginger Rejuvenating Body Lotion; (21) PS Oat Oil-Control Face Moisturizer; (22) PS Burdock Root Skin Mattifier; (23) PS Ginger Rejuvenating Body Balm; (24) PS Ginger Rejuvenating Hand & Nail Cream; (25) PS Fig Hydrating Body Balm; (26) PS Fig Hydrating Hand & Nail Cream; and (27) PS Everlasting Flower Night Moisturizer. (D.I. 292 at 5-6)

Christopher T. Rhodes, the amount of orange oil contained in the BBW products ranges from a low of 0.01% to a high of 1%. (D.I. 260, ex. J at 14-35) The same report indicates that 25 of the BBW products contain no more than 3% of any oat-derived ingredient.⁸ (Id.) The specified pH range for 16 of the BBW products overlaps in some way with the range of 4.5-6.0 (inclusive) stated in the '062 patent.⁹ (Id.)

III. STANDARD OF REVIEW

A court shall grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). The moving party bears the burden of proving that no

⁸According to Rhodes, Burt's Bees Citrus Facial Scrub contains 32.769% oat flour in the dry herb blend, which accounts for 44.3% of the final product; likewise, he states that Burt's Bees Orange Essence Facial Cleanser is comprised of either 5.1% oat flour or 5.1% Avena Sativa (Oat) Kernel Protein. (D.I. 260, ex. J at 27-28)

⁹(1) BBW Mango Mandarin Cream Body Wash; (2) TBS Better Lather Than Never Bubble Bath and Shower Cream; (5) Burt's Bees Citrus Facial Scrub; (6) Burt's Bees Orange Essence Facial Cleanser; (8) PS Ginger Rejuvenating Shower Foam; (9) PS Ginger Rejuvenating Body Scrub; (10) BBW Mandarin Body Lotion; (11) BBW Cool Citrus Basil Body Lotion; (15) Murad Resurgence Sheer Lustre Day Moisture; (16) Murad Resurgence Age-Diffusing Serum; (17) Murad Resurgence Age-Balancing Night Cream; (19) Murad Acne Spot Treatment; (20) PS Ginger Rejuvenating Body Lotion; (22) PS Burdock Root Skin Mattifier; (26) PS Fig Hydrating Hand & Nail Cream; and (27) PS Everlasting Flower Night Moisturizer.

genuine issue of material fact exists. See Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 n.10 (1986). "Facts that could alter the outcome are 'material,' and disputes are 'genuine' if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct." Horowitz v. Fed. Kemper Life Assurance Co., 57 F.3d 300, 302 n.1 (3d Cir. 1995) (internal citations omitted). If the moving party has demonstrated an absence of material fact, the nonmoving party then "must come forward with 'specific facts showing that there is a genuine issue for trial.'" Matsushita, 475 U.S. at 587 (quoting Fed. R. Civ. P. 56(e)). The court will "view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion." Pa. Coal Ass'n v. Babbitt, 63 F.3d 231, 236 (3d Cir. 1995). The mere existence of some evidence in support of the nonmoving party, however, will not be sufficient for denial of a motion for summary judgment; there must be enough evidence to enable a jury reasonably to find for the nonmoving party on that issue. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 (1986). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. See Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986).

IV. DISCUSSION

A. Anticipation

A patent is anticipated under 35 U.S.C. § 102 if a single prior art reference explicitly discloses each and every limitation of the claimed invention. See Lewmar Marine, Inc. v. Barient, Inc., 827 F.2d 744, 747 (Fed. Cir. 1987). The Federal Circuit has stated that "[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." Scripps Clinic & Research Found. v. Genentech, Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991). "In determining whether a patented invention is [explicitly] anticipated, the claims are read in the context of the patent specification in which they arise and in which the invention is described." Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc., 45 F.3d 1550, 1554 (Fed. Cir. 1995). The prosecution history and the prior art may be consulted "[i]f needed to impart clarity or avoid ambiguity" in ascertaining whether the invention is novel or was previously known in the art. Id. (citations omitted).

A prior art reference also may anticipate without explicitly disclosing a feature of the claimed invention if that missing characteristic is inherently present in the single anticipating reference. See Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Federal Circuit has explained

that an inherent limitation is one that is necessarily present and not one that may be established by probabilities or possibilities. See id. at 1268-69. That is, "[t]he mere fact that a certain thing **may** result from a given set of circumstances is not sufficient.'" Id. at 1269 (emphasis in original) (citations omitted). The Federal Circuit also has explained that "inherency operates to anticipate entire inventions as well as single limitations within an invention." Schering Corp. v. Geneva Pharms., Inc., 339 F.3d 1373, 1380 (Fed. Cir. 2003). Recognition of the inherent limitation by a person of ordinary skill in the art before the critical date is not required to establish inherent anticipation. See id. at 1377.

An anticipation inquiry involves two steps. First, the court must construe the claims of the patent in suit as a matter of law. See Key Phar. v. Hercon Labs. Corp., 161 F.3d 709, 714 (Fed. Cir. 1998). Second, the finder of fact must compare the construed claims against the prior art. See id. A finding of anticipation will invalidate the patent. See Applied Med. Resources Corp. v. U.S. Surgical Corp., 147 F.3d 1374, 1378 (Fed. Cir. 1998). Issued patents are presumed valid, and the "underlying determination of invalidity . . . must be predicated on facts established by clear and convincing evidence." Rockwell Int'l Corp. v. United States, 147 F.3d 1358, 1362 (Fed. Cir. 1998) (citations omitted).

1. The Soaps Manual

BBW contends that a prior art reference titled Soaps: A Practical Manual of the Manufacture of Domestic, Toilet and other Soaps (2d ed.), written by George H. Hurst and published in 1907 by Scott, Greenwood & Son (London) ("the Soaps Manual"), anticipates claim 9 of the '062 patent. More specifically, BBW argues that the Oatmeal Dry Soap described in the Soaps Manual contains oatmeal, a moisturizer and a perfume "to any extent and of any character the soap-maker desires." (D.I. 266, ex. C at 312-314) Orange oil is specifically identified in the Soaps Manual as one such perfume. (Id. at 164)

If the court had construed the limitations of the '062 patent as broadly as urged by plaintiff, the above reference arguably is anticipating. However, the court construed the limitations more narrowly, especially the orange oil limitation, which requires (under the court's construction) "at least 5% by volume of the non-water soluble liquid derived from an orange." (D.I. 358 at 3) The Soaps Manual does not disclose the use of orange oil in these quantities.¹⁰

2. The Juliano Patent

¹⁰Indeed, the glycerine soaps that list in their formulas "orange peel" or "oil of orange peel" contain only de minimus amounts of that ingredient, to wit, 0.005% and 0.006% by weight. (D.I. 266, ex. C at 272-273)

Like the Soaps Manual, United States Patent No. 4,014,995 ("the Juliano patent") broadly discloses compositions containing orange oil, oat flour, and a moisturizer. (D.I. 266, ex. B) In describing the prior art, the specification of the Juliano patent explains that

cleansing lotions and creams are emulsion systems containing a quantity of oils which vary between 15 and 50% by weight. These systems are designed to remove many cosmetic preparations, such as lipstick, facial makeup and eye makeup, by virtue of solvent and emulsifying mechanisms. . . .

Oat flour can be incorporated into cleansing lotions and creams not only to impart a skin conditioning effect by virtue of its protein content, but it offers moisturizing properties due to the presence of lipids.

(Id., ex. B at col. 2, ll. 32-37, ll. 51-54) As did the inventors of the '062 patent, the inventors of the Juliano patent shared "examples illustrat[ing] representative cosmetic formulations embodying the discovery of the present invention." (Id., ex. B at col. 6, ll. 12-15) The presence of "orange oil" is not explicitly disclosed (see e.g., id., ex. B at col. 40-41); however, the presence of "perfume" in detectable amounts is noted.¹¹ Even assuming for purposes of this motion practice that "perfume" inherently discloses the use of orange oil, the Juliano

¹¹In all but one of the examples where "perfume" is listed as an ingredient, the notation "QS" is used rather than a number signifying the "%W/W." In only one example, Example 24, is "perfume" noted as comprising "[a]bout 2-4%." (D.I. 266, ex. B at col. 21, ll. 55-68) "QS" stands for "quantum sufficiat," a Latin term used frequently in medicine and pharmacy to denote "a sufficient quantity."

patent does not disclose the orange oil limitation as that limitation has been construed by the court.

For the reasons stated, BBW's motion for summary judgment of invalidity under 35 U.S.C. § 102 (D.I. 265) is denied.

B. Obviousness

To establish that a patent claim is obvious, clear and convincing evidence must exist to show that "the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a). The question of obviousness turns on four factual inquiries: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective indicators of non-obviousness, more commonly termed secondary considerations. See Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966); B.F. Goodrich Co. v. Aircraft Braking Sys. Corp., 72 F.3d 1577, 1582 (Fed. Cir. 1996). The existence of each limitation of a claim in the prior art does not, by itself, demonstrate obviousness. Instead, there must be a "reason, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the references, and that would also suggest a reasonable likelihood of success." Smith Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 1356 (Fed. Cir. 1999). "Such a suggestion or motivation may come from the references

themselves, from knowledge by those skilled in the art that certain references are of special interest in a field, or even from the nature of the problem to be solved." Id.

To rebut a prima facie case of obviousness based on prior art, objective evidence of non-obviousness may be used. Tec Air, Inc. v. Denso Mfg. Mich., Inc., 192 F.3d 1353, 1360 (Fed. Cir. 1999). This objective evidence includes: (1) a long-felt and unmet need in the art for the invention; (2) failure of others to achieve the results of the invention; (3) commercial success of the invention; (4) copying of the invention by others in the field; (5) whether the invention was contrary to accepted wisdom of the prior art; (6) expression of disbelief or skepticism by those skilled in the art upon learning of the invention; (7) unexpected results; (8) praise of the invention by those in the field; and (9) independent invention by others. See Graham, 383 U.S. at 17-19. "'The objective evidence of non-obviousness . . . should when present always be considered as an integral part of the analysis.'" Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1393 (Fed. Cir. 1988) (omission in original) (quoting W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1555 (Fed. Cir. 1983)).

1. The prior art references

BBW identifies five prior art references that, when combined, arguably invalidate claims 6 and 9 of the '062 patent as being obvious.

a. The Dellutri patent

United States Patent No. 4,620,937 ("the Dellutri patent") discloses "[a] cleaning agent for use as an industrial heavy duty cleaner, as well as being a hand cleaner and an all purpose cleaner." (D.I. 270, ex. B, Abstract) Dellutri describes cleaning agents which include d-limonene obtained from orange oil and further teaches that, by adding aloe vera, his cleaning agent becomes an effective, non-irritating hand cleaner, "leav[ing] the hands with a pleasant citrus flavor, a natural softness, and a refreshing fragrance. Furthermore, the hand cleaner can remove soiled ingredients from the hands including oil, grease, paint, tar, ink, adhesives, grass and fruit stains." (Id., ex. B at col. 3, ll. 44-51) Claim 1 of the Dellutri patent discloses, in pertinent part, a cleaning agent comprising:

- a liquid mixture of distilled, stabilized citric oil, vinegar and water;
- said distilled, stabilized citric oil being between 20% and 90% by volume of said mixture;
- said distilled, stabilized citric oil including distilled D-Limonene, fatty acids, and a non-ionic detergent to add to and accelerate cleaning effect of said distilled D-Limonene;
- said D-Limonene being at least 50% by volume of said distilled, stabilized citric oil

(Id., ex. B at col. 4, ll. 11-21)

b. The Coleman reference

Richard L. Coleman, D-Limonene as a Degreasing Agent, The Citrus Industry, Vol. 56, No. 11, published in November 1975, describes "[t]he potential of d-limonene (the principal component in orange oil) as a degreasing agent." (D.I. 270, ex. C at LPM 000207) Recognizing that "d-limonene [was] an excellent solvent for grease and other organic materials," the author explored its use as a "waterless hand cleaner." (Id.) One of the hand cleaners in the reference contained both a moisturizer (lanolin) and an emulsifier (Arlacel 40). (Id., ex. C at LPM 000208) The author opined that the cleaning compositions having citrus oil in combination with a moisturizer and an emulsifying agent were preferred over conventional cleaners because they caused less skin irritation than traditional skin cleaning compositions. (Id., ex. C at LPM 000208-000209)

c. The Physicians' Desk Reference

The 24th edition of the Physicians' Desk Reference ("PDR") was published in 1969. (D.I. 270, ex. D) The PDR discloses the use of colloidal oatmeal in hand cleaning compositions for treating itchy skin, for softening skin, and for cleaning skin. (Id., ex. D at BBW 004405) The description of the Aveeno® Bar includes that fact that it "has a pH approximating that of normal skin." (Id.)

d. The Juliano patent

This reference has been described above. Juliano teaches the use of oat flour in cleansing creams and lotions. Oat flour has the beneficial ability to act as an emulsifier in the cleaning composition and is added to help soften the skin along with the other moisturizers. The final composition can be formulated to have a pH that approximates the pH of normal skin. (D.I. 270, ex. E, col. 1, ll. 67 to col. 2, ll. 5-8, 51-54)

e. The Soaps Manual

This reference has been described above and discloses the use of orange oil in soaps as a perfume. (D.I. 270, ex. O at BBW 009387, 009392-009393, 009406)

2. The history of the '062 patent

The inventors of the '062 patent submitted their application on September 27, 1989. Many of the original patent claims were rejected by the examiner under 35 U.S.C. § 103 over the prior art Coleman, Dellutri, and Juliano references. (D.I. 313, ex. 1) In response, the inventors argued that the cited references actually taught away from using orange oil to clean human skin because the prior art d-limonene references relied on the distillate d-limonene. Moreover, the inventors represented that they had "tested the compositions produced according to the ranges of the present application wherein an equal weight percent of d-limonene was substituted for the orange oil. In each case, the orange oil

based composition had superior cleaning properties than the identical composition with an equivalent amount of d-limonene substituted for the orange oil." (Id., ex. 2 at 2) The examiner allowed the claims.

On November 4, 1991, the '062 patent inventors filed a continuation-in-part application based on the '062 patent application. The Coleman and Dellutri references were disclosed. The examiner rejected the CIP for lack of written description. On April 15, 1997, the Board maintained the written description rejection and, sua sponte, added a rejection for obviousness under § 103. The Board cited Coleman, Dellutri and the PDR 1969. (D.I. 270, ex. G at BBW 008557-008560)

3. Analysis

The scope and content of the prior art includes cleaning compositions containing orange oil, citrus oil, or d-limonene; oat flour, oatmeal or oat gum as an emulsifier; one or more moisturizers; and a pH within the range of 4.5 to 6.0, inclusively. The plaintiff argues, however, that because none of the cited references specifically discloses orange oil as a cleaning component and because "the effects of d-limonene and orange oil are not the same," there remain genuine issues of material fact as to whether it was obvious to one of skill in the art to not only combine the above recited ingredients, but to use orange oil as the primary cleaning agent.

The court agrees with plaintiff, for several reasons. First, the claim construction has significantly narrowed the scope of the claims; consequently, the focus of the prior art references must be substantially sharpened. References that refer to perfumes that could refer to orange oil are not compelling. Second, despite all the attorney argument of record, the record is neither clear nor convincing as to whether orange oil and d-limonene are equivalent cleaning agents. Given the fact that no prior art reference specifically discloses the use of orange oil as a primary cleaning agent, the distinction between orange oil and d-limonene is critical.

For these reasons,¹² the court shall deny BBW's motion for summary judgment of invalidity under 35 U.S.C. § 103.¹³

C. Lack of Written Description

Defendants contend that asserted claims 6 and 9 are invalid for lack of written description pursuant to 35 U.S.C. § 112. The statutory basis for the enablement requirement, § 112, paragraph 1, provides in relevant part:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art

¹²There may well be secondary indicia of non-obviousness, but the court will not address such in this decision.

¹³For the reasons stated, the court denies KBC's motion for summary judgment based on the April 15, 1997 decision of the Board. (D.I. 245)

to which it pertains, or with which it is most nearly connected, to make and use the same

The Federal Circuit has explained that "[p]atent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. Tossing out the mere germ of an idea does not constitute enabling disclosure." Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997) (internal citations omitted). To satisfy the written description requirement, a specification must teach those skilled in the art how to make and to use the full scope of the claimed invention without undue experimentation. Id. at 1365. The written description requirement is a question of law based on underlying factual inquiries. See In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988); see also LizardTech Inc. v. Earth Resource Mapping, Inc., 424 F.3d 1336, 1345-46 (Fed. Cir. 2005).

Defendants at bar generally argue that, if the asserted claims are construed as broadly as urged by plaintiff, the specification of the '062 is nonenabling. More specifically, the working examples disclosed in the specification do not teach one of skill in the art to use orange oil at concentrations below 5%. Given the court's narrow claim construction, however, the motions for summary judgment of invalidity based upon lack of written description are no longer well grounded and shall be denied.

D. Inequitable Conduct

"Inequitable conduct occurs when a patent applicant breaches his or her 'duty of candor and good faith' to the PTO." Novo Nordisk Pharmaceuticals, Inc. v. Bio-Technology General Corp., 424 F.3d 1347, 1359 (Fed. Cir. 2005) (quoting 37 C.F.R. § 1.56(a)). Inequitable conduct may include "'affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive.'" Id. (citation omitted).

A determination of inequitable conduct entails a two step analysis. First, the court must determine whether the withheld or misrepresented information meets a threshold level of materiality. "Information is material 'where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent.'" Agfa Corp. v. Creo Prods., Inc., 457 F.3d 1366, 1373 (Fed. Cir. 2006) (citation omitted). A reference, however, does not have to render the claimed invention unpatentable or invalid to be material. Id.

After determining that the applicant withheld or misrepresented material information, the court must decide whether the applicant acted with the requisite level of intent to mislead the PTO. Allied Colloids, Inc. v. Am. Cyanamid Co., 64

F.3d 1570, 1578 (Fed. Cir. 1995). "Intent to mislead does not require direct evidence, and is typically inferred from the facts." Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc., 326 F.3d 1226, 1239 (Fed. Cir. 2003). "[W]hen balanced against high materiality, the showing of intent can be proportionally less." Id. at 1234.

"Materiality and intent must be established by clear and convincing evidence." Novo Nordisk, 424 F.3d at 1359. "Once materiality and intent have been established, the district court must weigh these factors in light of all the circumstances to determine whether a finding that inequitable conduct occurred is warranted." Id.

BBW contends that, to obtain allowance of the '062 patent, the inventors made two critical representations to the PTO: (1) no one had previously used orange oil or other citrus oils in a cleaner for human skin; and (2) although the active ingredient in orange oil - d-limonene - had been used in cleaners for many years, the inventors of the '062 patent claimed that they performed tests verifying that orange oil cleaned better than d-limonene. (D.I. 284 at 1; id., ex. E)

The court finds these statements to be material. However, consistent with the court's finding as to obviousness, there are genuine issues of material fact as to whether these statements are incorrect, as well as to the inventors' intent. Therefore,

the court denies BBW's motion for summary judgment (D.I. 258) of unenforceability due to inequitable conduct.

E. Daubert Motions

The parties have filed multiple motions to exclude the testimony of opposing experts under Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). The function of the court under Fed. R. Evid. 702 is to make a preliminary assessment of whether the underlying reasoning or methodology of the proffered expert testimony is scientifically valid and properly can be applied to the facts at issue. This gate-keeping function of the court was never meant to supplant the adversarial trial process. The fact that experts disagree as to methodologies and conclusions is not grounds for excluding relevant testimony.

1. Patent law experts

Under the court's guidelines, so-called patent law experts have a very limited role at trial. Given that both plaintiff and the defendants BBW, nevertheless, have proffered such experts and, further, have conducted a motion practice to exclude the trial testimony of each other's expert, it is appropriate that both motions should be granted. Therefore, plaintiff's motion to exclude the trial testimony of Michael H. Davis (D.I. 234) and BBW's motion to exclude the trial testimony of Larry W. Evans (D.I. 239) are granted.

2. Liability experts

Plaintiff moves to exclude the trial testimony of BBW's liability expert, John C. Carson, and to similarly exclude the trial testimony of KBC's liability expert, Robert Y. Lochhead. Not surprisingly, BBW moves to exclude the trial testimony of plaintiff's liability expert, Christopher T. Rhodes. Having reviewed all of these motions and the papers submitted in connection therewith, I find these motions (D.I. 230, 232, and 233) to be without merit. The experts are qualified in their fields and have based their opinions on valid methods and/or resources. However, to the extent that the court's claim construction and related decisions are inconsistent with the opinions expressed in their respective expert reports, such opinions will not be admitted at trial.

3. Damages expert

Finally, plaintiff moves to exclude the trial testimony of KBC's damages expert on the grounds that he did not appropriately consider the Georgia-Pacific factors in his analysis. The court is satisfied, however, that under the facts at bar, his economic analysis is reasonable and based on valid grounds. Therefore, plaintiff's motion to exclude (D.I. 231) is denied.

V. CONCLUSION

For the reasons stated, BBW's motion for summary judgment of invalidity under 35 U.S.C. § 102 (D.I. 265) is denied; BBW's

motion for summary judgment of invalidity under 35 U.S.C. § 103 (D.I. 268) is denied; BBW's motion for summary judgment of invalidity under 35 U.S.C. § 112 (D.I. 272) is denied; BBW's motion for summary judgment of unenforceability due to inequitable conduct (D.I. 258) is denied; KBC's motion for summary judgment of invalidity based upon a subsequent Board decision (D.I. 245) is denied; KBC's motion for summary judgment of invalidity based upon lack of written description (D.I. 247) is denied; and the Daubert motions are granted as to the parties' patent law experts (D.I. 234, 239) and denied with respect to all of the remaining experts (D.I. 230, 231, 232, 233).

An order shall issue.